

**Remarks and Election in Response to the Restriction Requirement**

Claims 1-19 and 21-29 are pending. Claim 17 has been amended. Support for amended claim 17 is found, for example, in paragraphs [0019], [0025], [0029], [0047], [0050], and [0051] and in claims 1 and 17 as filed. Claim 20 has been canceled.

For clarity, Applicants reiterate the Examiner's view of distinct inventions as expressed in the Restriction Requirement:

- Group I, claims 1-11, drawn to a biofunctionalized quantum dot with an antigen;
- Group II, claim 12, drawn to a formulation comprising a quantum dot and a liquid;
- Group III, claims 13-14, drawn to a quantum dot as a therapeutic agent;
- Group IV, claim 15, drawn to a quantum dot coated device;
- Group V, claim 16, drawn to a cell-quantum dot complex;
- Group VI, claims 17-22, drawn to a method for producing a biofunctionalized quantum dot functionalized with an antigen;
- Group VII, claims 23-25, drawn to a method of imaging;
- Group VIII, claim 26, drawn to a method of medical imaging;
- Group IX, claims 27-29, drawn to a method of therapy.

In response to the Restriction Requirement, Applicants elect Group VI, claims 17-22, as the invention and species with traverse with respect to the restriction over Groups I-V and VII-IX.

Applicant argues that the claims of Groups I-V (claims 1-16) all include the common special technical feature of "the biofunctional group compris[ing] a saccharide or the mercaptoalkanoic acid [being] linked to the surface of the nanocrystalline core without a shell layer", which Chan *et al.* does not present. Therefore, the claims of Groups I-V possess unity of invention.

Applicant argues that the claims of Group VI (claims 17-22) represent a process specially adapted for the manufacture of the product represented by the claims of Group I. For example, the process represented by claim 17 of Group VI would inherently result in the biofunctionalized quantum dot of claim 1 that has "the biofunctional group compris[ing] a saccharide or the

mercaptoalkanoic acid ... linked to the surface of the nanocrystalline core without a shell layer."

Therefore, the claims of Groups I-VI possess unity of invention.

Applicant argues that the claims of Groups VII-IX (claims 23-29) represent methods of use of the product represented by the claims of Group I. For example, the method of imaging represented by claim 23 of Group VII, the method of medical imaging of claim 26 of Group VIII, and the method of therapy of claim 27 of Group IX each use the biofunctionalized quantum dot of claim 1. Therefore, all the claims of Groups I-IX possess unity of invention.

No fee is believed to be necessary in connection with the filing of this Response to Restriction Requirement. However, the Commissioner is authorized to charge any fee deemed necessary or credit any overpayment found to Deposit Account No. 22-0261, under reference number 31978-230391.

Applicant maintains that all pending claims, claims 1-19 and 21-29, are patentable and that, as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Applicant respectfully requests that a Notice of Allowance of all pending claims, that is, claims 1-19 and 21-29 as amended, be timely issued in this case.

Respectfully submitted,

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